



DEPARTMENT OF THE NAVY  
NAVAL AIR SYSTEMS COMMAND  
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS  
WASHINGTON DC 20361 -0001

IN REPLY REFER TO  
NAVAIRINST 3960.3  
PMA253  
4 May 92

NAVAIR INSTRUCTION 3960.3

From: Commander, Naval Air Systems Command

Subj: VALIDATION OF NAVY AIR DEFENSE THREAT SIMULATORS

Ref: (a) OPNAVINST 3960.15 (NOTAL)

Encl: (1) U.S. Navy Electronic Warfare Training Ranges  
(2) U.S. Navy Electronic Warfare Test and Evaluation Ranges/Laboratories

1. Purpose. To implement policy and assign responsibilities for the validation of air defense threat simulators being developed under the auspices of the Naval Air Systems Command (NAVAIR), or used by the United States (U.S.) Navy for development and testing of airborne weapon systems, or training of Navy aircrew personnel.

2. Background

a. Reference (a) assigns NAVAIR as the Chief of Naval Operations' (CNO) technical agent for Navy Air Defense Simulator validation and tasks NAVAIR to implement validation procedures. Reference (a) requires that all Navy air defense threat simulations fielded during or after 1986, which are used for development and testing of weapon systems, or training of Navy combat personnel, will be validated simulators. Earlier simulations will be validated as required by major update or modification, or as funding permits in conjunction with routine operations and maintenance.

b. Major acquisition and procurement decisions are based on the results of testing developmental hardware against air defense threat simulators. In order for these decisions to be correct, the simulators must be valid representations of the threat. To be a validated simulator does not indicate that every parameter of the simulator is identical to the equivalent parameter of the actual threat system, but that parametric measurements of the simulator fall within tolerances required to support the test/training requirements for which the simulator is to be used. The parameters of the actual threat system are those stated by the current Defense Intelligence Agency (DIA) threat assessment.

3. Scope. This instruction is applicable to all Navy air defense threat simulators located at ranges and laboratories listed in enclosures (1) and (2), which are used for:

- a. Developmental phase testing.
- b. Operational phase testing and tactics development.
- c. Training of Navy aircrew and associated personnel.



0808LD0559210

#### 4. Policy

a. Threat Simulator Critical Parameters (TSCP's), "are judged as those which interact critically with ECM equipment and are important in the resolution of test and training issues and satisfaction of test and training objectives."

b. The validation process can identify critical parameters which may require instrumentation, but the actual instrumentation requirements are determined by the range user working with the range during mission planning.

c. Deviations will be analyzed, with respect to these TSCP's and the simulator instrumentation requirements, and impacts of these deviations on the mission of the simulator will be determined by the validation process.

d. Based on this analysis, informed decisions will be made by the CNO regarding the validity of simulators to support testing or training.

#### 5. Responsibilities

a. Naval Air Systems Command Headquarters (NAVAIRHQ)

(1) Reconnaissance and Electronic Warfare Systems Program Manager (PMA253) will:

(a) Obtain funding for the air defense threat simulator validation process from CNO and/or the CROSSBOW-S Committee.

(b) Fund the Naval Air Warfare Center Weapons Division, China Lake (NAVAIRWARCENWPNDIV China Lake) to establish an independent Simulator Validation Coordinator to coordinate the conduct of unbiased simulator validation at all Navy laboratories and ranges.

(c) Fund Navy Laboratories and Ranges to conduct validation of assigned simulators.

(d) Coordinate NAVAIR review of validation report submitted by the Simulator Validation Coordinator. Recommend to CNO (OP-913) approval of these simulators as valid for the purposes of developmental testing and the training of Navy personnel, and when appropriate recommend waivers so that those systems not formally approved may continue to support limited operations.

(e) Provide Commander, Operational Test and Evaluation Force, material for review of validation reports.

b. NAVAIRWARCENWPNDIV China Lake

(1) Commanding Officer, NAVAIRWARCENWPNDIV, China Lake will designate an independent Simulator Validation Coordinator, who has technical expertise in both air defense threat simulator development and electronic warfare. If this Simulator Validation Coordinator is not organizationally different from that of the simulator developers, care must be taken to ensure that the results of validation are entirely objective, and free from bias imposed by the simulator development program.

(2) Simulator Validation Coordinator will:

(a) Operate independent from offices which are responsible for management of simulator development programs.

(b) Manage U.S. Navy simulator validation programs for NAVAIR coordinating with responsible Navy Laboratories and Ranges, as required.

(c) Develop and maintain a U.S. Navy Air Defense Threat Simulator Validation Procedures Manual, defining validation procedures to be followed by Navy Laboratories and Ranges.

(d) Develop and maintain a validation data base.

(e) Review air defense simulator validation reports prepared by Navy Laboratories and Ranges, and forward the results to NAVAIRHQ (PMA-253/AIR-546/PMA-248).

c. U.S. Navy Laboratories and Ranges will:

(1) Designate a single point of contact to coordinate with the Navy Simulator Validation Coordinator, regarding validation requirements for assigned air defense simulators and validation report format.

(2) Coordinate with the Navy Simulation Validation Coordinator to:

(a) Determine TSCP's, derived from the Navy testing or training requirements for which the simulator was designed.

(b) Collect and analyze simulator performance data using specification data in the case of a simulator in development, or measured data in the case of an existing simulator.

(c) Compare simulator performance data with the corresponding threat parameters from the current DIA threat assessment, and the specific TSCP's.

(d) Submit a validation report, which analyzes the impact on specific testing or training requirements, of any deviations from TSCP's, to the Navy Simulation Validation Coordinator.

6. Reports. The reporting requirements contained in paragraph 5c(2) (d) of this instruction are exempt from reports control by SECNAV Instruction 5214.2B.



R. V. JOHNSON  
Deputy Commander

Distribution: (See next page)

NAVAIRINST 3960. 3

4 May 92

Distribution: FKA1A (established quantity); others 2 copies

SNDL: 26F; FKA1A (Deputy Commander for Acquisition and Operations, Assistant Commanders, Comptrollers, Command Special Assistants, Designated Program Managers, Directorate Directors, and Office and Division Directors); FKR

Copy to: (2 copies each unless otherwise indicated)

SNDL: A3 (OP-913 (5 copies)); C21 (1 copy); FKA1A (AIR-00D A/L (1 copy), AIR-71232 (10 copies), AIR-71233B(40 copies), PMA25304, AIR-1002E (1 copy), AIR-546 (5 copies)); FKM27 (NPPSO-NDW C/L)

Stocked: Commanding Officer, Navy Aviation Supply Office, Physical Distribution Division, Code 103, 5801 Tabor Avenue, Philadelphia, PA 19120

U.S. NAVY ELECTRONIC WARFARE TRAINING RANGES

Fallon Complex, Naval Air Station Fallon, NV - FB7 (Fallon)  
Marine Corp Air Station Beaufort, SC - V5 (Beaufort)  
Atlantic Fleet Weapons Training Facility (AFWTF), Roosevelt Roads, PR - FA30

Southern California Offshore Complex  
Fleet Area Control Surveillance Facility  
FACSFAC  
Naval Air Station, North Island  
Bldg. 6, 1479  
San Diego, CA 92135-5116

Mid Atlantic Electronic Warfare Range (MAEWR), Cherry Point, NC  
Commanding General  
Second Marine Aircraft Wing  
Marine Corps Air Station  
Cherry Point, NC 28533  
Attn: Codes G3 EWO, PSC 4468

Yuma Complex, AZ  
Marine Aviation Weapons Tactics Squadron ONE  
Marine Corps Air Station  
Yuma, AZ 85369-6073

Pacific Missile Range Facility (PMRF), Barking Sands, Hawaii  
Pacific Missile Range Facility (PMRF)  
Barking Sands, HI 96752-0128  
Attn: Code 7324-3

U.S. NAVY ELECTRONIC WARFARE TEST AND EVALUATION RANGES

Naval Air Warfare Center Aircraft Division, Patuxent River  
Naval Air Warfare Center Weapons Division, Point Mugu  
Naval Air Warfare Center Weapons Division, China Lake  
Naval Research Laboratory, DC - E3A\*  
Naval Air Warfare Center, Aircraft Division, Warminster

\*(others under SNDL code "FKR")